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ABSTRACT

In 1979, Rhode Island legislators mandated an assessment of the number of non English speaking children in the State. The resulting study was comprised of two main phases. The first, a census of non English speaking students, included (1) a teacher survey, in which every teacher listed his/her students and indicated an observed primary language for each student; and (2) the collection of language information for every student on a home language survey form. The second phase of the assessment process sought information procedures for estimating potential costs of meeting the instructional needs of non English speaking children. This phase included (1) the determination of a procedure for estimating the number of students eligible for bilingual services; and (2) the collection of information from other States and communities regarding factors that must be considered in estimating program costs. This report contains a detailed description of the assessment methods and process employed, as well as the statistical results of the investigation. The non English speaking student population (whose five largest groups are Portuguese, Spanish, Italian, French, and Cape Verde Creole speakers) is described by age level and school district. Cost estimates for bilingual program development are also discussed at length. (Author/GC)

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Assessment of Non-English Speaking Students
in Rhode Island

Conducted: September, 1979 - February, 1980

FINAL SUMMARY REPORT

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Submitted to:

The Rhode Island Department of Education

Submitted by:

Center for Evaluation Research at
Rhode Island College (CERRIC)
and
Curriculum Research and Development Center at
University of Rhode Island (CRDC)

March 1, 1980

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A project of this magnitude and importance could not have been carried out as efficiently and precisely as it was without the cooperation and assistance received from educators throughout Rhode Island as well as from students and their parents. No other state has accomplished a survey of this nature and magnitude. It could not have been done without the interest and dedication of individuals involved at all levels of the assessment process. This has truly been a cooperative effort.

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INTRODUCTION

The General Assembly of the State of Rhode Island mandated an assessment of the number of children who speak a language other than English, in order to evaluate the need for bilingual education programs in Rhode Island. In responding to this mandate, which was established by the General Assembly (House Bill 79-H6045, passed during the January, 1979 Legislative Session), the Rhode Island Department of Education (RIDE) began the process of identifying a contractor(s) for completing the assessment task. The Center for Evaluation Research at Rhode Island College (CERRIC) and The Curriculum Research and Development Center (CRDC) at the University of Rhode Island were engaged for this purpose in September, 1979.

The assessment was comprised of two main phases. The first phase, a census of non-English speaking students, involved the design and implementation of a two step survey process. A Teacher Survey was carried out in which every teacher listed his/her students and indicated an observed (primary) language for each student.

The second step of the census phase was the collection of language information for every student on a Home Language Survey form. The Home Language Survey form was distributed to students based upon results generated by the Teacher Survey. Each teacher received a packet of Home Language Survey forms assembled according to the languages of students in his/her class as determined by the Teacher Survey of observed student languages. That is, for students listed as English speaking by the teacher, English Language Home Survey forms were provided. For each student listed as non-English speaking, a Home Language Survey form in the appropriate language was provided. Teachers distributed the Home Language Survey forms to students and collected them again after

completion. CRDC staff members collected the completed survey materials and delivered them to CERRIC for analysis after a careful check for completion had been made.

The Teacher and the Home Language Survey steps of the census phase were completed within the intended time frame with a very high, 94%, rate of return. This process could not have been completed in the timely and accurate way it was without the cooperation and assistance of many individuals, teachers, and administrators in the local school districts throughout Rhode Island. The 94% return rate compares most favorably with return rates obtained for other similar studies and far exceeds the return rate generally achieved for large-scale questionnaire surveys.

A second major phase of the process was the identification of information bearing upon the development of cost estimation procedures in order to determine more accurately the potential costs which will be encountered in meeting the instructional needs of non-English speaking students in Rhode Island. As was the case in the census phase of the project, two main elements comprise the cost estimation phase of the project.

The first element is the determination of a defensible procedure for estimating the number of students who will be eligible for bilingual services following language dominance and proficiency screening of each student. The Home Language Surveys in conjunction with the Teacher Surveys identify students who potentially need services. Only after a detailed individual language screening can actual program eligibility be determined. Since the assessment project designed by RIDE entailed the collection of Teacher Home Language Survey data (revealing numbers of students potentially needing service before individual language screening) it was necessary to investigate the relationship between Home Language Survey results and the number of students attaining program

eligibility after individual screening. This relationship was explored by means of examining the experiences of communities and states where a longer history of participation with bilingual programs existed. Based upon the ratios of Home Language Survey results to numbers of program eligible students found in previously existing programs, an estimation of the numbers of students who will be program eligible has been developed and is detailed in the second part of this report.

A second element of the cost estimation phase involved the collection and synthesis of information from states and communities regarding cost factors which must be attended to in estimating program costs. This phase was accomplished through a series of interviews, telephone conferences, and site visits. Information was collected from six Rhode Island communities where bilingual-type programs exist or are being developed (Central Falls, Cumberland, Newport, Providence, Warren and Westerly), four communities in Connecticut (West Hartford, Bridgeport, New Haven, and Norwalk), three communities in Massachusetts (Boston, North Hampton, and Springfield) and the Massachusetts Department of Education. The results of this investigation are discussed in the second section of this report.

The assessment of non-English speaking students, carried out in response to a legislative mandate, and done in a manner consistent with the Lau guidelines for determining needs for bilingual programs, has been a unique, precedent-setting process in the United States. This process has created a data base for the state and for each local district in the state. This data base, the results of the Teacher and Home Language Survey, will be a valuable resource to each local district in the state as well as to RIDE and to education policy makers as policies and practices governing the provisions of bilingual education services are developed. Local school districts will, as a result of this process, be

relieved of much of the burden of carrying out the Teacher and Home Language Surveys in the future. The data base can be continually updated by local districts as students enter and exit their programs, satisfying the record keeping requirements laid down by the Lau guidelines and the federal government.

The assessment of non-English speaking students in Rhode Island was a large-scale project in every way. It involved the survey of all public, private, or state-operated elementary schools - some 470 in all. Approximately 183,000 students were surveyed. The Home Language Survey step alone required the packaging and distribution of approximately 400,000 survey instruments (including extras in each language variety to assure complete coverage). This massive Home Language Survey phase was completed in a period of less than five weeks. Repeated follow-up efforts were made to ensure a high return rate, resulting in an overall 94% rate of Home Language Survey returns. The task of organizing, checking, entering, and rechecking the data returned was also a massive one. Analysis of all data returned began on January 18, 1980, and was completed in time for the compilation, editing, review and submission of this report by March 1, 1980.

The sum of all of these efforts represents a valuable basis upon which policies can be developed and decisions made with regard to the creation, implementation and support of effective programs of bilingual education in Rhode Island. No other state has, to date, seen fit to carry out such an extensive survey and investigation process in order to systematically examine the need for bilingual education programs before the creation of policies and the establishment of funding levels for such programs. Thus, the State of Rhode Island approaches the issue of bilingual education from a position of informed decision-making which may serve as a model for other states.

I. THE CENSUS OF NON-ENGLISH SPEAKING STUDENTS

The census was carried out in a manner consistent with guidelines laid down by the U.S. Office of Education (USOE) and the Office of Civil Rights (OCR) relating to the Lau decision on bilingual education requirements. The Lau guidelines specify that students should be identified as eligible for bilingual education services through a multi-step process entailing a Teacher Survey of observed student languages, a Home Language Survey of primary language spoken and an individual language assessment to determine program eligibility. Described here are the Teacher and Home Language Survey procedures used in the compilation of the non-English census results for Rhode Island. All forms, surveys, and fact sheets distributed in conjunction with the census appear as Appendices A through H.

The Census Procedures

Census Step I - The School Teacher/Survey

This project called for data to be collected from two independent sources: the school and the home. The first step called for instruments to be completed by a teacher or some other school staff member for each child in the school. School personnel were directed to record the language believed spoken by each student in the school. Those responses were collected on forms resembling a class roster. Control of these forms was accomplished through a checklist/control sheet for each building (to be completed by the principal) and for each district (to be completed by the designated district's coordinator). The distribution and collection of those materials was coordinated by CRDC staff at the University of Rhode Island, who were able to secure a complete canvass of

every district by the week of November 15. By that date, Teacher Survey packets had been collected from 100 percent of the schools, checked for completeness and delivered to CERRIC at Rhode Island College. Upon arrival at CERRIC, the data were subjected to the following control procedures:

1. The supervisor recorded each district's envelopes and contents. This record contained a District identification number and the date of arrival.
2. Project staff were each assigned a district and became responsible for all work on the district. The name of the person assigned to the district, and the date of start and of completion were all recorded.
3. As the materials were reviewed for completeness, absent or incomplete data were noted for later updating through contact with the school.
4. When the district review was completed, the URI/CRDC Liaison person and the district coordinator were phoned for clearance to call the schools directly. If permission was granted, CERRIC staff resolved the issues directly with the school. If not, the list of missing data was reported to the district coordinator who assumed responsibility for securing it.
5. When all data were collected, confirmed, and a district was labeled complete, CERRIC staff had:
 - a. compared classroom enrollments to school enrollments
 - b. compared school enrollments to district enrollments
 - c. noted and corrected errors wherever and whenever possible
6. Each teacher questionnaire was assigned an identification code composed of school and classroom number; then every student tentatively identified as bilingual (observed speaking a language other than English or reported to come from a home where a non-English language was spoken) was identified.
7. All questionnaires containing names and observed languages of children were sent to the computer room for keypunching and entry into the data file.
8. The questionnaires were stamped PROCESSED and returned for filing in the original folders for each school.

By December 10, 1979, Step I was complete. At the completion of this phase, data were collected from every school and district in Rhode Island except for Ocean Tides in Narragansett, a state operated school. Efforts were then shifted to Step II of the census process.

Census Step II - The Home Survey

Step II required the packaging and distribution by CRDC of approximately 400,000 survey instruments (extra instruments were included within every classroom envelope in the event that a follow-up effort was needed) - to districts as soon as the district returned its school surveys. Districts were directed to return the completed Home Language Surveys within two weeks after their receipt. The Home Language Surveys began returning to CRDC and then to CERRIC during the week of December 5, 1979, with most of them returned by January 2, 1980. Late returns were encouraged and processed until the data were computer analyzed on February 17.

When all materials were processed, the survey accounted for an approximate 94 percent return rate. This high return rate can largely be attributed to the outstanding cooperation of school district personnel, and the thorough nature of the survey and follow-up process. A detailed list of Home Language Survey returns is contained in Appendix I.

To ensure that these Home Language Surveys were handled promptly and accurately, CERRIC staff logged and checked the data in a manner similar to that employed in Step I. In addition, the following steps were added:

1. Home Language Surveys were coded and appended directly to the teacher roster which listed each student in the classroom.
2. New students were added to teacher rosters, and withdrawn students were deleted.
3. As envelopes were processed, records were kept so that missing surveys were quickly identified and followed up with phone calls to the URI Liaison person.
4. Signatures were checked and coded for validity.
5. Languages were coded for ease of key punching - Whenever new or previously unlisted languages were encountered, they were added to a current list of language codes. (At the time of completion, 93 unique language codes were listed. After review by members of

the Archaeology Department and Multi-Cultural Multilingual Resource Center at Rhode Island College, this list was consolidated to 72 unique codes.)

6. Home Language Surveys which had one or more responses indicating a non-English language were added to the computer file whether or not they had been identified earlier by the teacher. Thus two independent methods were used to identify students who might need service by a program.

Step II of the census was relatively complete by January 18, when Step III began.

Census Step III - A Follow-up Process

The final step of the census activity consisted of adding late returns, correcting errors, and incorporating data from the six school districts which had conducted the survey earlier and who were not included in the present census process, into the final results.

Late Surveys - Every survey returned to CERRIC/CRDC was processed for inclusion in the computer analyses. Upon completion of this effort, the file contained 10,649 records.

Error Factors - The minimal amount of human error occurring in the data can be attributed to the following factors:

- a. key punch or clerical error.
- b. the School Survey identifying the student as bilingual had no Home Survey returned. (As of February 18, 445 students were in this category).
- c. staff error had overlooked a Home Language Survey form and it had not been processed.
- d. the student had moved from one school to another between Step I and Step II.

When feasible, based on time line and type of error factor, corrections were made in the data.

Self Conducted Studies - The districts of Central Falls, Cumberland, Newport, Providence, Warren, and Westerly had conducted their own bilingual survey earlier. These data were delivered to CERRIC who in turn reviewed the calculations, had all the figures verified by the district, and then proceeded to merge those data into a format common to all other school districts. Those tables are included in this report.

Random Review of Records - As a final check against error, staff were directed to select a systematic sample of twenty-five (25) schools and review every instrument submitted by that school. The completion of that task, and the review of approximately 15,000 instruments found the incidence of error to seldom exceed two items per school. In almost every case, the error was inconsequential to the overall count of program eligible children.

What follows is a series of census results tabulations which detail the findings ranked by language groups for the state, by the five largest language groups, statewide results by school type (public and non-public and grade), language groups by age levels, language results at the school district level, and results for six school districts where bilingual programs currently exist. Further detailed results are contained in a complete set of computer printouts submitted to RIDE and described in the report Home Language Survey - Report on Procedures.

Language Groups in Rhode Island

In all, 78 language groups are listed in Table 1, State Totals by Language Type. The languages are listed in rank order, from the largest identified group to the smallest. Portuguese is the largest single group with 6,488 students, followed by Spanish, Italian, French, and Cape Verde Creole. It should be noted that Table 1 includes a category labeled "Discrepancies." This figure of 1,478 represents those Home Language Surveys returned marked English as prime language, but for whom Teacher Surveys indicated an observed language in school other than English. Thus the total figure, 17,327, reflects all those students identified either by Home Survey or Teacher/School Survey who might be eligible for bilingual services. Table I includes the data collected by the six Rhode Island communities which did not participate in the current census process.

It should be further noted that the data in Table 1 are based on the results of the Teacher/School and Home Language Surveys. These results indicate those students who have been observed or who have indicated, in the Home Survey, that they spoke a language other than English. The data do not indicate relative language proficiency. That is, student language groups listed indicate potential needs for bilingual service. Only through careful, individual language screening can student eligibility for bilingual services be determined. The figures in Table 1 provide a sound estimate of potential needs by language group. An approach to further refinement of these data to provide estimates of the numbers of students potentially eligible for services is considered in Section II of this report.

Table 1
State Totals
By Language Type

<u>Language</u>	<u>Total Identified</u>
Portuguese	6,488
Spanish	2,994
Italian	1,902
French	1,359
C.V. Creole	543
Chinese	262
Greek	255
German	238
Armenian	200
Hmong	186
Arabic	173
Polish	167
Korean	124
Other	109
Tagalog-Tegala	104
Laotian	79
Russian	75
Vietnamese	64
Cambodian	57
Japanese	50
Hebrew	46
Dutch	35
Persian	33
Swedish	30
Hindi	23
Gujarati	15
Thailand	14
Hungarian	13
Urdu	12
Indian	11
Malaysian	11
African - Other	11

Table 1 (Con't)

<u>Language</u>	<u>Total Identified</u>
Finnish	10
Lithuanian	10
Ukranian	9
Rumanian	8
Turkish	8
Telugu	8
Philippino	8
Icelandic	7
Norwegian	7
Yiddish	7
Bengali	6
Danish	6
African	6
Latvian	5
Tamil	5
Kemer	5
Italian-Other	5
Punjabi	4
Estonian	3
Czech	3
Marathi	3
Kannada	2
Fanti	2
Yugoslav	2
Slavic	2
Gaelic	2
Maltese	2
Scottish	2
Sicilian	2
Welsh	1
Basque	1
Huligaymon	1
Bassa	1

Table 1 (Con't)

<u>Language</u>	<u>Total Identified</u>
Konkani	1
Pueblo Indian	1
Hawaiian	1
Sinhalese	1
Albanian	1
Latin	1
Swiss-German	1
Kpelle	1
Ethiopian	1
Akan	1
African - Swahili	1
Indic - Nepali	1
Serbo-Croatian	1
Discrepancies*	1,478

Total 17,327

*Home Survey responses indicating English, but discrepant with teacher surveys which indicated a language other than English as the prime language of the student. In addition 445 students were identified as speaking a language other than English on the school survey but had no home survey returned. Data for these students is not incorporated in Table 1.

The Five Largest Language Groups

Table 2 presents the census results listed by grade level for the five largest language groups as identified by the teacher/language and home surveys. It is interesting to note that each of the five language groups listed show a consistency of numbers across all grade levels with a drop-off in grade 12. This drop-off of numbers in grade 12 may be due to factors such as school drop-out rates being higher for bilingual students than for English speaking students.

It should be noted that a crosscheck of the data in Table 2 with that in Table 1 may reveal apparent discrepancies. These discrepancies are due to incomplete information returned on some Home Language Surveys where grade level was omitted by the parent(s). A grade by grade detailing of smaller language groups is available in computer printouts submitted to RIDE in support of this report.

Table 2
Five Largest Language Groups by Grade

	K	1	2	3	4	5	6	7	8	9	10	11	12	Spec. Ed.	Un- Graded	Pre- School
*Portuguese 6455	498	566	557	565	461	540	549	538	494	495	386	329	267	167	25	18
*Spanish 2989	230	296	256	282	240	202	259	222	251	201	206	161	131	44	3	4
*Italian 1901	76	117	138	112	133	119	145	168	173	190	171	167	157	22	2	1
*French 1354	39	40	47	70	66	72	90	108	127	175	193	157	153	11	3	3
*C.V. Creole 533	27	43	47	29	28	35	38	64	36	46	53	42	33	8	0	4

*Discrepancies exist between language totals on this table and those provided on Table 1 because of missing information on some of the home surveys, where the language was reported, but not the grade level.

Numbers of ungraded students due to incomplete home surveys

Portuguese	33
Spanish	5
Italian	1
French	5
C.V. Creole	10

Table 3
Statewide Results by School Type and Grade

	K	1	2	3	4	5	6	7	8	9	10	11	12	Spec. Ed.	Un- Graded	Pre- School	Total
Non-Public	201	243	251	215	226	208	263	255	224	157	178	153	166	20	14	28	2,802
Public	785	1038	1110	1082	950	956	1054	1093	1100	1221	1081	957	835	231	28	26	13,547
Westerly Combined																	386
Cumberland Combined																	648
																	17,383*

*This total inconsistent with totals on other charts because of missing information on the home language survey.

Language Groups by Age Level

The results of census data tabulated to show language groups by age level are displayed in Table 4. For this table, age was calculated by subtracting the year of birth indicated on the Home Language Survey and subtracting from 1980. Additionally, ages are reported as entered on the Home Language Survey and some error may have occurred due to incorrect completion of the Home Language Surveys. The totals on Table 4, when compared with state totals by grade or for language groups, vary due to the existence of some 81 missing observations where no age was entered on the Home Survey. A final important note must be made to indicate that the age level results shown in Table 4 contain only results for communities surveyed in the current census, the six communities of Providence, Newport, Westerly, Cumberland, Central Falls, and Warren are not reflected in these figures since they did not submit survey results categorized by age levels.

Table 4

Number of Students with Primary Language Other than English by Age

Age	State Totals*
3	4
4	14
5	48
6	583
7	666
8	755
9	823
10	788
11	792
12	895
13	868
14	864
15	824
16	836
17	808
18	702
19	230
20	45
21	13
22	5
23	1
24	1
26	1
28	2

* The totals above do not include the public schools of the six districts which completed their surveys prior to the state surveys.

School Districts and Language Groups

Table 5 presents the results of the language census ranked according to the number of non-English speaking students in the total community and broken down for public and non-public schools. The results are ranked with the district having the largest number of non-English speaking students listed first. This table is intended to display an indication of bilingual program need by community with the highest apparent need locations listed first.

Table 6 consists of a ranked tabulation similar to that in Table 5 but with the rankings done in terms of the percent of the school population in each district identified as non-English speaking by the census process.

Table 5

Number of Students with Primary Language Other than English
(Public and Non-Public), Ranked by District

District	Public	Non-Public	Total
Providence	4592	889	5481
Pawtucket	1895	336	2231
East Providence	1444	192	1636
Woonsocket	608	399	1007
Central Falls	762	121	883
Bristol	672	198	870
Cranston	663	134	797
Cumberland			648
West Warwick	375	70	445
Westerly			386
Warwick	323	62	385
Warren	223	25	248
Johnston	210	31	241
North Providence	187	44	231
Coventry	192	26	218
Lincoln	216		216
Tiverton	170		170
Middletown	127	34	161
Newport	67	69	136
Barrington	115	16	131
Portsmouth	99	26	125
State Schools			93
North Kingstown	91		91
North Smithfield	91		91
Burrillville	77	4	81
South Kingstown	57	19	76
East Greenwich	49	5	54
Chariho	36		36
Narragansett	35	1	36
Smithfield	31	2	33
Scituate	29		29
Foster-Glocester	20		20
Henry Barnard		12	12
Exeter-West Greenwich	9	1	10
Little Compton	6		6
Hopkinton	4		4
Jamestown	3		3
Richmond	2		2
Glocester	2		2
Foster	1		1
Charlestown	1		1
New Shoreham			0
Total			17,327

Table 6

Number of Students with Primary Language Other than English
By District, Ranked by Percent of School Population

District	Percent Identified	Total Enrollment	Number Identified
Central Falls	30%	2,941	883
Bristol	25%	3,461	870
Providence	20%	26,231	5481
Pawtucket	17%	12,539	2231
East Providence	15%	10,622	1636
Warren	13%	1,901	248
Westerly	10%	3,563	386
Woonsocket	11%	9,566	1007
Cumberland	9%	6,654	648
West Warwick	9%	4,985	445
Lincoln	7%	3,108	216
Cranston	6%	12,643	797
Tiverton	6%	2,738	170
Johnston	5%	4,445	241
North Providence	5%	4,192	231
Coventry	4%	5,938	218
Middletown	4%	3,983	161
North Smithfield	4%	2,060	91
Barrington	3%	3,672	131
Burrillville	3%	2,813	81
Henry Barnard	3%	333	12
Portsmouth	3%	3,603	125
East Greenwich	2%	2,585	54
Narragansett	2%	1,794	36
Newport	2%	5,761	136
South Kingstown	2%	3,760	76
Warwick	2%	18,175	385
Charlho	1%	1,803	36
Exeter/W. Greenwich	1%	994	10
Foster/Glocester	1%	1,392	20
Little Compton	1%	370	6
North Kingstown	1%	5,068	91
Scituate	1%	1,728	29
Smithfield	0.9%	3,406	33
Jamestown	0.6%	473	3
Hopkinton	0.4%	827	4
Foster	0.3%	261	1
Glocester	0.3%	664	2
Richmond	0.3%	533	2
Charlestown	0.2%	484	1
New Shoreham	0.0%	67	0
TOTALS	9%	182,901*	17,234**

* Total enrollment is based on enrollment rosters provided by district teachers as a part of the teacher survey. Therefore, these enrollment figures may vary from official RIDE enrollment figures based on the regular Fall school census.

**Does not include state operated schools.

Results For Communities Conducting Their Own Surveys

The communities of Central Falls, Cumberland, Newport, Providence, Warren, and Westerly carried out Teacher/School and Home Language Surveys as a part of the implementation of their own bilingual instructional programs. Since the data were already available in these communities, they were not required to participate in the statewide census process and were asked to submit their survey results separately for incorporation in the reports. The results of these separate surveys are contained in the tables which follow. Tables 7-12 show results for each of the six communities by grade level and for totals. Response rates for the census survey for the six communities averaged 95%, a figure comparable to the 94% return rate achieved for the statewide census of the remaining communities.

TABLE 7

CENTRAL FALLS SCHOOLS COMBINED - BILINGUAL CHILDREN

LANGUAGE	P.S.	L.D.	K.	1	2	3	GRADE		6	7	8	9	10	11	12	TOTALS
							4	5								
Arabic				3	3	3	2	2	3	5	3	5	5	4	1	39
Armenian											1	1		1		3
Cape Verdean			3	9	9	3	2	3	5	6	3	4	4		1	52
English				3	1	1					1					6
French			1	3	2	1	6	5	2	6	10	6	3	6	1	52
Greek												1				1
Polish			2	3	1	1	2		1	1	1		1		1	14
Portuguese	1	2	24	35	28	24	36	31	29	30	34	27	25	18	18	362
Spanish			25	34	23	27	32	21	26	32	33	31	28	22	13	347
Turkish							1	1	1							3
Vietnamese			1					1	1							3
Other								1								1
TOTALS	1	2	56	90	67	60	81	65	68	80	86	75	66	51	35	883

TABLE 7 A

CENTRAL FALLS PUBLIC SCHOOLS - BILINGUAL CHILDREN

<u>LANGUAGE</u>	<u>P.S.</u>	<u>L.D.</u>	<u>K.</u>	<u>GRADE</u>												<u>TOTALS</u>
				1	2	3	4	5	6	7	8	9	10	11	12	
Spanish			21	24	16	18	27	16	17	24	28	31	28	21	13	284
Portuguese	1	2	24	31	27	24	34	28	26	30	34	27	25	18	18	349
Cape-Verdian			3	9	9	3	2	3	5	6	3	4	4		1	52
Arabic				3	3	3	1	2	3	5	3	5	5	4	1	38
French			1	1			1			1	2	6	3	6	1	22
Polish				1	1	1	1		1				1		1	7
Turkish							1	1	1							3
Vietnamese			1					1	1							3
Armenian											1	1		1		3
Greek												1				1
TOTALS	1	2	50	69	56	49	67	51	54	66	71	75	66	50	35	762

TABLE 8
CUMBERLAND PUBLIC SCHOOLS - BILINGUAL CHILDREN

LANGUAGE	SP. ED.	GRADE												TOTALS	
		K	1	2	3	4	5	6	7	8	9	10	11		12
Arabic		1	1					1							3
Armenian										1			1		2
Chinese				1		1									2
Dutch					1		1				1				3
Philippino															0
French			1	2	2	1	1	1	3	4	9	17	8	8	57
German				1		1		1		2			1	1	6
Greek														1	1
Gujarati															0
Hungarian					1										1
Indian			1												1
Italian				1	1	1			1						4
Korean		1			1	1	2			1	1	1	1	2	11
Malaysian				1			1								2
Norwegian	34														35

Table 8 (cont.).

Persian								1						3	4
Polish		3	1									1	4	4	13
Portuguese	34	81	26	33	28	21	36	18	26	19	34	57	48	19	480
Spanish		2			4	1	4	1	1		2	4		2	21
Swedish													1	1	2
Tamil					1			1							2
Urdu	3		1		1					1					6
Vietnamese	2	2	1	2	1	1					1	2			12
TOTALS	39	90	31	41	41	28	46	24	31	28	48	82	64	41	634

TABLE 8 A

CUMBERLAND NON-PUBLIC SCHOOLS - BILINGUAL CHILDREN

LANGUAGE	SP. ED.	K	GRADE												TOTALS
			1	2	3	4	5	6	7	8	9	10	11	12	
Armenian									1						1
Philippino			1	1					2						4
French					1										1
German		1													1
Gujarati			1					1							2
Korean			1												1
Portuguese		1		2											3
Spanish									1						1
TOTALS	0	2	3	3	1	0	1	3	1	0	0	0	0	0	14

TABLE 8B

CUMBERLAND SCHOOLS COMBINED - BILINGUAL CHILDREN

LANGUAGE	SP. ED.	K	GRADE												TOTALS
			1	2	3	4	5	6	7	8	9	10	11	12	
Arabic		1	1					1							3
Armenian									1	1			1		3
Chinese				1			1								2
Dutch						1		1			1				3
Philippino			1	1				2							4
French			1	2	3	1	1	1	3	4	9	17	8	8	58
German		1					1		1		2		1	1	7
Greek														1	1
Gujarati			1					1							2
Hungarian						1									1
Indian				1											1
Italian				1	1	1			1						4
Korean		1	1			1	1	2			1	1	1	2	12
Malaysian				1				1							2
Norwegian								1							1

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Table 8 8 (cont.)

Persian								1						3	4
Polish		3	1									1	4	4	13
Portuguese	34	82	26	35	28	21	36	18	26	19	34	57	48	19	483
Spanish		2			4	1	4	2	1		2	4		2	22
Swedish													1	1	2
Tamil					1			1							2
Urdu	3		1		1					1					6
Vietnamese	2	2	1	2	1	1					1	2			12
TOTALS	39	92	34	44	42	28	47	27	32	28	48	82	64	41	648

TABLE 9
NEWPORT PUBLIC SCHOOLS - BILINGUAL CHILDREN

LANGUAGE	SP. ED.	K	1	2	3	4	GRADE								TOTALS
							5	6	7	8	9	10	11	12	
Spanish		3	1	2	2	2		1	1	1	2	1			16
Korean		1							1		1				3
Portuguese		1	1	1	2	1		1	1	5	4	2	2	2	23
Greek	1		1				1	1	1			1		2	8
Italian			1												1
French			1					1							2
Chinese			1	1				1	1		2		1		7
Japanese							1					1			2
Akan								1							1
Philippino- Tagalog										1				1	2
German										1	1				2
TOTALS	1	5	6	4	4	3	2	6	5	8	10	5	3	5	67

TABLE 9A
NEWPORT SCHOOLS COMBINED - BILINGUAL CHILDREN

LANGUAGE	SP. ED.	K	1	2	3	4	GRADE		7	8	9	11	12	TOTALS
							5	6						
Akan								1						1
Armenian						1								1
Chinese			1	1				1	1		2	1		7
Dutch			1					1	1					3
English		3	2	11	3				4					23
French			1	2		1		1						5
Gaelic				1										1
German		1								1	1			3
Greek	1		1				1	1	1			1	2	8
Hungarian		1												1
Icelandic					1					1				2
Italian			2	1				1		1				5
Japanese							1					1		2
Korean	1								1		1			3

Table 9A(cont.)

Portuguese	1	6	5	2	4	4		2	4	8	4	2	2	2	46
Slavic				1		1									2
Spanish		4	1	2	2	3	1	1	1	2	2	1			20
Swedish										1					1
Ta										1				1	2
TOTALS	3	15	14	21	10	10	3	9	13	15	10	5	3	5	136

TABLE 10
PROVIDENCE PUBLIC SCHOOLS - BILINGUAL CHILDREN

LANGUAGE	SP. ED.	K	1	2	3	4	GRADE		7	8	9	10	11	12	TOTALS
							5	6							
Cape Verdean	2	6	10	7	5	9	6	6	11	4	3	13	11	6	99
Italian	12	39	33	29	28	42	30	45	65	66	98	77	62	71	697
Portuguese	20	71	149	112	119	101	80	112	108	107	90	64	56	34	1223
Spanish	27	148	183	143	159	134	115	133	118	138	107	107	87	66	1665
English	1		4		7	1	7	3		1	1	1	3	2	31
Greek	1	1	2	2	2	1		1	2	2	1	2	3		20
French	1	5	4	3	6	7	2	3	12	10	11	16	10	17	107
Hmong	1	9	33	15	15	13	9	11	5	6	11	16	14	4	162
Chinese- Cantonese		5	3	9	8	5	6	3	6	9	10	10	11	7	92
Philippino		2	2												4
Yiddish		1									2		1		4
African- Other		2	1	2	1			1	1		1	1	1		11
Arabic		5	2	3	4	3	5	3	3	3	5	3	4	3	46
Armenian		4	8	2	6	10	11	5	7	5	8	5	2	10	83

TABLE 10 (cont.)

Italian- Other	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Japanese	2	2	1								2	1	4	12	
Other	1	1		1					1		5	1	2	12	
Korean	1				2				1	1	3	2	4	14	
Cambodian	4	9	9	5	5	2	5	2	2	5	3	6		57	
Vietnamese	2	1	1		1	1		3	1			2	1	13	
Lao	1	5	11	5	4	1	5	6	4	3	7	3	4	59	
African		6												6	
Philippino- Tagalog		2	3	5	5	6	3	1	2	1	4	1	3	36	
Thai		1			1	1								3	
Lithuanian							1		1					3	
Polish		1			1	1		1	1	2	5	5	5	22	
Swedish		1		1					1			1	1	5	
Indic-Nepali		1												1	
Russian			2					1		1	7	4	4	19	
German			2	2	4	1	3	1	5	6	4	4		32	
Romanian			1		1									2	
Sicilian				1						1				2	
Hebrew				2					3	4	3	3	3	18	
Scottish					2									2	

TABLE 10 Continued

Indic-Other	1	1			1				1						4
Chinese-Other	1					1									2
Danish	1														1
African-Swahili			1												1
Indic-Bengali			1						1						2
Turkish					1							1	1		3
Serbo-Croatian							1								1
Hungarian									1				1		2
Finnish										2	1				3
Dutch										1		1	1		3
Czechoslovakian												1			1
Iranian-Persian													2		2
TOTALS	65	310	465	357	383	355	287	345	356	376	375	361	301	256	4592

TABLE 10A
PROVIDENCE SCHOOLS COMBINED - BILINGUAL CHILDREN

LANGUAGE	N	K	SP. ED.	GRADE												TOTALS
				1	2	3	4	5	6	7	8	9	10	11	12	
African				6												6
African- Other		2		1	2	1			1	1		1	1	1		11
African- Swahili								1								1
Arabic	1	5		3	3	6	4	6	3	4	4	5	4	5	3	56
Armenian		5		8	2	6	11	12	6	7	5	9	7	3	11	92
Cambodian		4		9	9	5	5	2	5	2	2	5	3	6		57
Cape Verdean	1	6	2	12	7	5	10	6	7	11	4	3	13	11	6	104
Chinese- Cantonese		5		3	9	8	5	6	3	6	9	10	10	11	7	92
Chinese				1	2		1	2	1			1		1		9
Chinese- Other							1			1						2
Czechoslo- vakian														1		1
Danish							1									1
Dutch												1		3	1	5

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TABLE 10A
PROVIDENCE SCHOOLS COMBINED (cont.)

LANGUAGE	N	K	SP. ED.	GRADE												TOTALS
				1	2	3	4	5	6	7	8	9	10	11	12	
Fanti		1														1
Finnish												2	1			3
French	1	6	1	5	4	6	10	4	5	16	11	16	22	15	29	151
German	1				2	3	4	2	4	2	5	7	4	4		38
Greek		3	2	2	3	2	2		3	2	2	1	2	5	1	30
Hebrew		2		2	4	5	1			1	3	5	3	3	4	33
Hindi	1	1								1						3
Hmong		9	1	35	17	18	17	12	14	6	7	13	16	15	5	185
Hungarian											1			3		4
Indic- Bengali								1			1					2
Indic- Nepali				1												1
Indic- Other							1	1		1			1			4
Italian	1	45	12	52	46	33	55	42	68	81	76	113	93	76	83	876
Italian- Other		1				1			1		1	1				5
Japanese		2		2	1			1			1		2	1	4	14

TABLE 10A
PROVIDENCE SCHOOLS COMBINED (cont.)

LANGUAGE	N	K	SP. ED.	GRADE												TOTALS
				1	2	3	4	5	6	7	8	9	10	11	12	
Korean	1	2		1			2				1	1	3	4	5	20
Laotian		1		5	13	7	4	2	6	6	5	3	7	4	4	67
Lithuanian		1		1					1		1					4
Marathi														1	1	2
Other	3	1		3	3	1	2	1		2	1	1	5	1	2	26
Persian				1	1					2		2	1		4	11
Philippino- Tagalog				2	3	5	5	6	3	1	3	2	4	1	4	39
Philippino- Other		2		2												4
Polish		1	1	5		2	2	7	2	7	5	3	6	7	5	53
Portuguese	4	75	20	152	117	125	111	87	122	114	111	94	73	64	43	1112
Punjabi													1			1
Romanian					1		1									2
Russian	2	8		4	6	8	5	4	3	1	1	1	8	5	4	60
Scottish							2									2
Serbo- Croatian										1						1
Sicilian						1						1				2

TABLE 10A
PROVIDENCE SCHOOLS COMBINED (cont.)

LANGUAGE	N	K	SP. ED.	1	2	3	4	GRADE	6	7	8	9	10	11	12	TOTALS
								5								
Spanish	2	155	27	204	164	180	157	135	171	148	162	120	118	97	75	1915
Swedish				1		1		1			1			1	1	6
Thai				1			1	1								3
Turkish									1					1	1	3
Ukranian														2		2
Urdu												1				1
Vietnamese		2		1	1		1	1		3	1	1		2	1	14
Yiddish		1		1								2		1	2	7
English		12	11	16	4	21	9	13	5	8	8	11	5	6	8	137
TOTAL	13	358	77	542	424	450	430	356	435	435	432	436	413	357	318	5481

TABLE 11
WARREN PUBLIC SCHOOLS - BILINGUAL CHILDREN

<u>LANGUAGE</u>	<u>BIL.</u> <u>ESL</u>	<u>K</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>GRADE</u>		<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>TOTALS</u>
							<u>5</u>	<u>6</u>							
Portuguese	22	14	16	15	22	19	12	14	25	7	23	7	13	4	213
Chinese					1				1	1				1	5
French				1	1							1			3
Polish	1														1
Greek											1				1
<u>TOTALS</u>	23	14	16	16	24	19	12	14	26	8	25	8	13	5	223

TABLE 11A
WARREN SCHOOLS COMBINED - BILINGUAL CHILDREN

<u>LANGUAGE</u>	BIL. ESL	K	<u>GRADE</u>										12	<u>TOTALS</u>
			1	2	3	4	5	6	7	8	9	10	11	
Chinese									1	1	1	1	1	6
English									1				1	2
French				1	2							2		5
Greek											1			1
Italian										1				1
Polish	1													1
Portuguese	22	14	16	15	22	19	12	14	28	9	24	12	16	231
Other													1	1
<u>TOTALS</u>	23	14	16	16	24	19	12	14	30	11	26	15	18	248

TABLE 12

WESTERLY SCHOOLS COMBINED - BILINGUAL CHILDREN

LANGUAGE	GRADE												TOTALS
	1	2	3	4	5	6	7	8	9	10	11	12	
Italian	21	25	22	32	32	22	22	40	16	19	25	15	291
Spanish	1	1	1	2		4	2	4		2			17
Portuguese		1	1			3	1	2		2	2		12
French	1		2	2	1	1	2	3	4		2	1	19
Chinese		1	3	2	2	1		2	1	2	1	1	16
Hebrew				1									1
Dutch		1			2			1					4
Swedish	1	1			1	1		1			1		6
German		1	4							1	1		7
Korean			1										1
Finnish	1	1					1						3
Polish			1	1	1				2				5
Greek		1						1	1				3
Tagalog					1								1
TOTALS	25	33	35	40	40	32	28	54	24	26	32	17	386

II. PUPIL AND COST ESTIMATIONS

Introduction

The two major components of the second phase of the project were:

(1) Identification of a means to estimate the number of program eligible students from the number of students identified on the Home Language Survey; and (2) assisting RIDE in identifying bilingual program cost and estimations of potential expenditures for local education agencies.

In order to present this information in a form which will allow the reader to have a more comprehensive understanding of all the issues relating to these two areas, this part of the report is divided into the following sections:

1. An introduction to the stages of bilingual program development.
2. An explanation of the data and process utilized in the development of an estimation of the number of potentially program eligible students in Rhode Island.
3. The presentation of data concerning bilingual program costs from existing programs and estimations of costs of bilingual programs in Rhode Island.
5. Recommendations and conclusion.

Stages of Bilingual Program Development

Bilingual education programs may be operationalized in a number of different ways. In this section we have attempted to identify the four major components in which all bilingual programs would undertake activity. Even though programs may already be in existence, they continue activities in all of these phases. These components are displayed on page 45 in Figure 1.

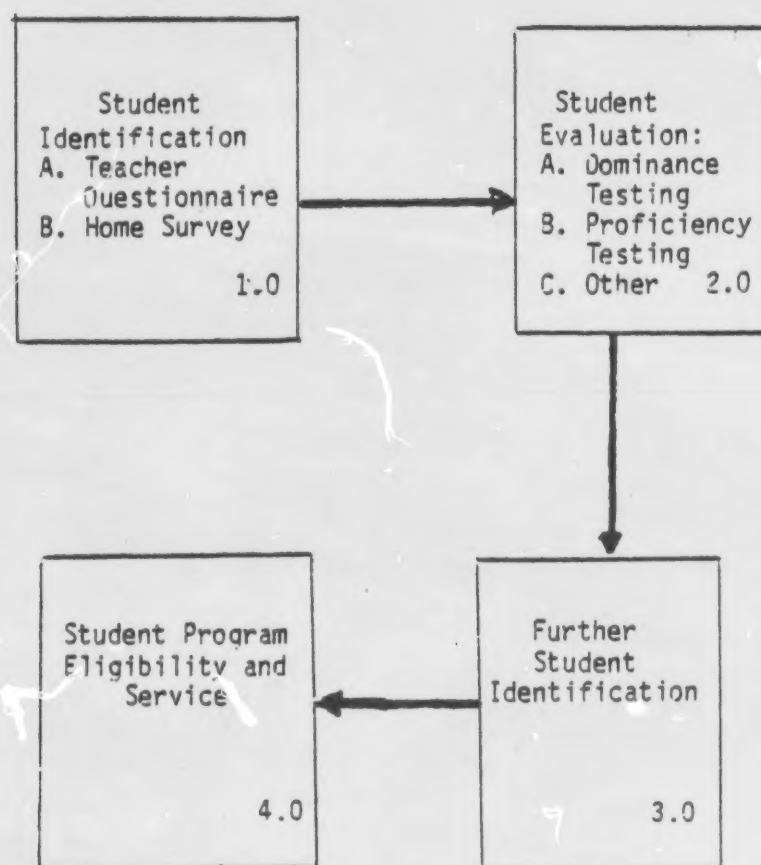
Stage 1 (1.0) is Student Identification. The intent of this process is to identify students for further evaluation to determine if they need bilingual education services. Two major activities are undertaken in this process. First, a Teacher Survey is completed followed by a Home Language Survey. The Teacher Survey consists of five separate pieces of information. Teachers are asked to identify each student by name, grade, and sex. (See Appendix F-L).

The Teacher Survey is also designed to gather teacher perceptions of a student's language at school and home. Teachers are asked to judge student language from informal observations of the student in the school setting, as well as personal interactions with the student. The primary purpose of the question concerning home language useage is to identify the language to be used on the Home Language Survey for each student.

The Home Language Survey is given to every child in the school department to take to their residence. Parents or guardians are asked to respond and sign the instrument. Based upon results from the Teacher Survey, and the Home Language Survey instruments are sent in the language most often spoken in the home, in addition to English. The Home Language Survey usually consists of five or six questions in addition to the

Figure 1

Stages of Bilingual Program Development



student's name, school, birth date, and grade. A copy of the Home Language Survey instrument used in Rhode Island is included in Appendix G. Each question is designed to elicit information from parents concerning the language most often used by the child. Questions in the Rhode Island survey were:

1. What language do you MOST OFTEN use when speaking to your child?
2. What language did your child FIRST learn to speak?
3. What language does your child MOST OFTEN use when speaking to brothers, sisters, and other children at home?
4. What language does your child MOST OFTEN use when speaking with you or others at home?
5. What language does your child MOST OFTEN use when speaking with friends or neighbors, OUTSIDE the home?

Parents/guardians are asked to respond by circling either E (English) or O (other) for each question. In addition, if they circle the "O" response, they are asked to specify the language used.

Results of the Home Language Survey are used to identify students who need further evaluation to determine their eligibility for bilingual programs. A number of different criteria are used to determine these students to be evaluated.

Most school departments have chosen a simple criterion for identification, any single item on the Home Language Survey which is answered with an "O" response places the child in the group for further evaluation. However, several variations are used in this process, including three "O" responses and a weighted scale in which some questions are worth more points than others. These variations will be discussed further in a later portion of this report.

One final statistic is also important to this process. The Lau Guidelines and their interpretation by the Office of Civil Rights have suggested a 100% return rate on the Home Language Survey. In Rhode

Island, the survey return rate was 94%. This compares favorably with other states where individual districts conducted their own survey. In every local district case, however, it is important to ascertain the return percentage in order to determine the validity of the home survey results for that district.

Stage 2 is also presented in Figure 1 under 2.0, Student Evaluation. Following the activities in Phase 1, districts have identified students who need further evaluation in order to determine their program eligibility. This process is undertaken in three ways: 1. Dominance Testing 2. Proficiency Testing 3. Other Evaluation. It is important to note that means of screening are not undertaken in a specified order. Indeed, "other evaluation" techniques are often the first method utilized.

The concept of dominance and subsequent testing revolves around the language which the child uses most often. Dominance scores on tests are used to determine which language the child prefers and uses most often. However, dominance testing does not in itself determine if a child will be placed in a bilingual program. It does, on the other hand, give the school department information about what language the child speaks.

Proficiency and dominance testing examines how well a child speaks English. A low score on a proficiency test will almost certainly make a child eligible for the program. Norm referenced instruments such as the BINAL, CRANE, BOLT, or the LAB have been used for both language dominance and proficiency testing. A complete list of test appears in Appendix J.

Districts may use a portion or all of a testing battery for both dominance and/or proficiency. Each district selects its own tests for dominance and proficiency, and in addition, select the criteria for identifying program eligibility by establishing cut-off scores on the test or using publisher suggested cut offs.

A third evaluation approach titled "Other" includes several formal and informal methods of determining program eligibility. Many districts have "teams" comprised of teachers and/or administrators in schools with high concentrations of non-English speaking minorities. When a new child enters a school, this team examines the child's need for bilingual education. If a child is unable to speak English, the team may place the child directly into a bilingual program without dominance or proficiency testing. A second example concerns the number of children identified in the Home Language Survey. In many instances, when a list of students is compiled for further evaluation, bilingual directors and staff members will make personal visits to the students homes or have phone conversations with parents/guardians to determine if students should be further evaluated. If it is determined that a child needs no other evaluation, his or her name is removed from the list.

In summary, it is best to view the student evaluation process, or Stage 2.0, as a theoretical "Black Box", (i.e., presently not standardized across districts or by the state). In the student evaluation process, a number of activities and resources are utilized to determine program eligibility. From district to district these activities and resources are at great variance. If we view the process as a "Black Box", we can say that a number of children are identified for further evaluation and a number are screened out in each district. In the final analysis, a number of students are deemed eligible for bilingual programs.

Figure 1 Stage 3.0 presents the process for students identified as program eligible entering a bilingual program. We know that there are

several types of bilingual programs. It is only necessary to note that programs are in operation, since types of programs have no bearing on this portion of the report.

Finally, Stage 4.0 represents the Further Identification of Students. Basically, school departments are responsible for updating their Home Language Survey each year for new students. This also means they are responsible for student evaluation and program eligibility screening for these children and, ultimately, placement in the bilingual program if necessary.

In summary, we have identified four stages of Bilingual Program Development. The first stage is student identification which has two steps, the Teacher Questionnaire and the Home Language Survey. As noted, the Teacher Survey is used to identify students who may have a primary language other than English and to attempt to identify the home language of students in order to select the language to be used for the Home Language Survey. The Home Language Survey, which is filled out and signed by the student's parent/guardian is comprised of five or six questions designed to identify students with home languages other than English. It is also important to remember that local school departments have chosen to use several different criteria in this identification process, some using one specific question for language identification and others using combinations of as many as three questions.

Stage 2.0 of the process consists of further student evaluation. This is generally accomplished in three ways: 1. Dominance Testing 2. Proficiency Testing 3. Other Evaluation. School districts may use a variety of commercial instruments or locally developed instruments for these purposes. Dominance is, then, a characterization of a person's language choice in relationship to English, and proficiency is an

indication of language skill in English and the other language(s) spoken. In addition, informal methods are used such as interviews, phone calls, or home visits. The purpose of each of these methods is to determine program eligibility of individual students. Since the local school department determines the criteria for eligibility, program eligibility levels may vary from district to district.

For the final two stages, Student Program Eligibility and Service and Further Student Identification, we briefly discussed the responsibility of the local school department to provide programs for eligible students and to continue an ongoing process of student identification and evaluation. In short, each school department is responsible for providing appropriate bilingual services to eligible students based on a carefully documented set of criteria backed up by complete records of student language characteristics.

Estimation of Program Eligible Students

When the Home Language Survey was completed for the state of Rhode Island, data became available identifying students in need of further language evaluation. As noted in the previous section of this report, each district implementing bilingual education programs will be required to conduct this screening procedure. However, in the interim, it is necessary that the Rhode Island Department of Education develop estimates of the numbers of students who may be program eligible in the fall of 1980.

In order to assist RIDE in this task, CRDC undertook a number of activities which included literature reviews, travel to projects internal and external to the state, and phone conversations with individual experts at both the local school department, state education agency and federal government levels. Details and schedules of this process have been submitted to RIDE in a separate document. A complete list of states contacted for Bilingual Education cost formulas appears as Appendix K.

In total, CRDC staff members visited 15 bilingual programs in Massachusetts, Connecticut, and Rhode Island. Information was collected on a variety of issues pertaining to bilingual education programs. Of particular interest is the information contained in Table 13. The table presents data concerning the difference between the number of students identified for further evaluation and the number of actual program participants. The left hand column lists the name of the districts contributing information and the first column gives district totals of students identified through the Home Language Survey Instrument needing further evaluation. The second column presents the number of students

Table 13
Students Identified and Served in
Selected Bilingual Programs

State	District	Number Identified by Home Survey	Number Served in Program	Percent Served in Program
R.I.	Central Falls	762	335	44%
	Cumberland	634	197	31%
	Newport*	67	31	46%
	Providence	4,592	1,878	41%
	Warren	223	135	61%
Mass.	Boston	12,000	6,700	56%
	North Hampton	163	76	47%
	Springfield	5,700	1,297	23%
Conn.	Bridgeport	4,000	2,120	53%
	New Haven	3,500	1,600	46%
	Total	31,641	14,369	45%

*ESL Program Only

served in the program following the evaluation process, and the last column presents the percentage of students enrolled in programs following the evaluation process. As can be seen, the percentage of students served ranges from 31% to 61%. When the figures are totaled (at the bottom of the table), 31,641 students were identified through the Home Language Survey of which 14,369 were enrolled in bilingual education programs. This represents 45% of the total students identified.

In consultation with Dr. Ernest J. Mazzone, Director of Massachusetts Bureau of Transitional Bilingual Education, CRDC staff posed the same question concerning the number of students who might become eligible following evaluation. Dr. Mazzone suggested that based upon his experience in Massachusetts over the past several years, 45 to 50 percent was a reasonable estimate of actual student program eligibility from the original students identified through the Home Language Survey.

In addition, Dr. Mazzone provided a summary of state totals for language groups served by bilingual programs in Massachusetts. This information is presented in Table 14. In this table, the first column lists the language categories. The second column is titled First Language Not English. This is defined as children born outside the U.S. whose native tongue is not English, or children born within the U.S. of non-English speaking parents. The third column represents the number of students classified as "cannot perform in English". This is defined as children whose first language is not English and who are incapable of performing ordinary classwork in English. The last column presents the percentage difference between the number of "First language not English" and the number of "cannot perform in English".

Table 14

Language Survey and Program Eligibility Results
for the State of Massachusetts - Spring, 1979

Language Group	1st Lang. Not Eng.	Cannot Perform in English	% Cannot Perform in English
Cape Verdean*	880	509	58%
Chinese	2,061	674	33%
French*	1,396	478	34%
Greek	1,834	557	30%
Italian*	2,556	1,002	39%
Portuguese*	12,012	3,780	32%
Spanish*	21,032	9,333	44%
Other	3,647	1,257	34%
Total	45,418	17,590	39%
*Total	37,876	15,102	40%

* Major Language Types Identified in Rhode Island
Home Language Survey

The totals indicate that of the 45,418 determined to have a first language not to be English, 17,590 or 39% were found to not perform in English at an acceptable level.

The asterisks indicate the five languages which were found to be the highest percentage in Rhode Island. Totals just for these language types indicate that 40% of these students could not adequately use the English language.

At first glance, this information would seem to substantiate using a figure of 45% to estimate the number of students eligible for bilingual programs in Rhode Island. There are, however, several problems in this assumption. As noted in the previous section of this report, school departments utilize a wide variety of instruments and methods in evaluating students. The same inconsistencies as previously noted were found among the ten communities in Table 13. Also noted in the previous section were the inconsistencies in approaches used in the identification of students by the Home Language Survey. Within the ten communities in Table 13, several used one question as the indication for further evaluation; two used two or more questions, and one used a weighted formula.

A second consideration concerns high concentrations of non-English speaking minority groups. There is evidence to support the contention that higher percentages of students become program eligible where larger communities of minorities exist. This may further distort the estimation of 45% in a particular community.

A further consideration must be the number of students who have dropped out of public school or never enrolled because they do not speak English. In addition, the immigration of certain non-English speaking minority groups is in additional variable which cannot be

fully accounted for. It is safe to assume, however, that if bilingual programs containing English as a Second Language (ESL) components are fully implemented throughout the state, some of the drop outs or non-enrolled population may attend school. In addition, as more non-English speaking minorities enter the state, these programs may serve to entice a larger number of immigrants to enter the school program than was previously the case. However, given the information at hand, it is recommended that RIDE use a figure of between 45% and 50% to estimate program eligible students from the Home Language Survey results.

A summary of the data concerning the estimation of program eligible students provides evidence supporting the contention that between 45% and 50% of students identified as having a primary language other than English (on the Home Language Survey) may become program eligible.

When reviewing the data collected from selected communities in Massachusetts, Connecticut, and Rhode Island, an average of 45% eligibility was found from Home Language Survey to program eligibility. Further, the Director of the Massachusetts Bureau of Transitional Bilingual Education (Dr. Ernest Mazzone) concurred with the 45% to 50% estimation. In addition, currently available Massachusetts bilingual program statistics indicate the presence of the same major language groups identified in the Rhode Island Home Language Survey. These groups displayed a program eligibility percentage of 40% in Massachusetts.

Three problems were identified concerning the estimation level of 45% to 50%. First, the wide variety of methods used to determine program eligibility by local school departments was discussed. In addition, concentrations of specific non-English speaking minorities and immigration patterns were considered to be unaccounted for variables with

respect to bilingual program participation. However, it is recommended the 45% to 50% figure for estimation be used, since it represents the best information available at the present time and is strongly supported by the data gathered during this study.

Cost Estimations

Several sources of data were used in developing cost estimations for bilingual programs for the State of Rhode Island in fiscal year 1980-81. First, a review of literature was conducted in order to ascertain what information was available concerning program costs. Second, during the program visitations mentioned in the previous section, cost data were collected. Finally, telephone and personal interviews were conducted with bilingual education program and cost experts.

The review of the literature revealed a study of Texas Bilingual program costs undertaken by Dr. Jose A. Cardenas at the Intercultural Development Research Association (IDRA) in San Antonio, Texas. The purpose of the project which was conducted in 1975-76 was defined as identification of costs in bilingual education programs. The results of the study presented areas of funding and cost parameters for each category. Table 15 presents the information from the study. As noted, the five cost categories are: 1. Staffing (which included teachers, aides, and clerical help, 2. Materials including curriculum development, 3. Library Resources, 4. Equipment, and 5. Testing which included tests not utilized in the regular school program. Administration/personnel costs were included. In order to further define costs according to grade level and year of the program, the study concluded with program cost estimates which can be seen in Table 15.

According to the study, a first year program at the kindergarten level would have an excess expenditure of \$243.77. This figure contrasted with a first year program at the fifth grade level (\$205.77 per pupil) suggests a \$38.00 per pupil difference. It is also clear that

Table 15

Results of a Study of Bilingual Program Costs in Texas

YEAR OF IMPLEMENTATION	Grade K				Grade 1				Grade 2			
	1	2	3	4	1	2	3	4	1	2	3	4
RESOURCE AREAS												
Staff	160.75	160.75	160.75	160.75	160.75	160.75	160.75	160.75	160.75	160.75	160.75	160.75
Materials	35.00	24.00	22.00	20.00	31.00	23.00	21.00	19.00	29.00	23.00	19.00	19.00
Equipment	20.54	6.85	6.85	6.84	20.54	6.85	6.85	6.84	20.54	6.85	6.85	6.84
Testing	2.48	1.32	1.32	1.32	2.67	1.51	1.51	1.51	2.78	1.62	1.62	1.62
Library	25.00	9.00	9.00	9.00	25.00	9.00	9.00	9.00	25.00	9.00	9.00	9.00
TOTAL PER PUPIL COST	243.77	201.92	199.92	197.91	239.96	201.11	199.11	197.10	238.07	200.22	197.22	197.21

	Grade 3				Grade 4				Grade 5			
	1	2	3	4	1	2	3	4	1	2	3	4
Staff	160.75	160.75	160.75	160.75	145.59	145.59	145.59	145.59	145.59	145.59	145.59	145.59
Materials	20.00	20.00	19.00	18.00	22.00	14.00	13.00	11.00	22.00	14.00	13.00	11.00
Equipment	20.54	6.85	6.85	6.84	10.27	3.43	3.42	3.42	10.27	3.43	3.42	3.42
Testing	2.79	1.63	1.63	1.63	2.83	1.67	1.67	1.67	2.91	1.75	1.75	1.75
Library	25.00	9.00	9.00	9.00	25.00	9.00	9.00	9.00	25.00	9.00	9.00	9.00
TOTAL PER PUPIL COST	237.08	198.23	197.23	196.22	205.69	173.69	172.68	170.68	205.77	173.77	172.76	170.76

program costs decrease over time as noted with the kindergarten where first year costs of \$243.77 were over \$45.00 more expensive than fourth year costs.

If first year costs are averaged from grades kindergarten to five, an average first year cost for a bilingual program would be approximately \$228.00 per child. This figure would certainly be subject to inflation over the past four years.

Current cost information for bilingual programs was available from only three states: New Jersey, Massachusetts, and Texas. In New Jersey, the New Jersey Thorough and Efficient Act allocates funds for bilingual education programs. The law in New Jersey allows for the reimbursement of funds to local school departments who have provided programs for students in need of bilingual education. A formula is used which multiplies the number of students in "approved programs" by 16% which is multiplied by the per pupil expenditure set each year by the state legislature. It is difficult to estimate the exact figure for this year, but state department of education officials indicated that it will be approximately \$300.00 per pupil.

The state of Massachusetts has changed from an excess cost reimbursement system (which paid the difference between a regular student reimbursement of \$1,200 and a bilingual student reimbursement of \$1,500 for approximately \$300.00 per student to local school departments) to a weighted formula. Each program is assigned a weight. A further explanation is presented from the "Guide to the New School Aid Law" published by the Massachusetts Department of Education. The following definitions describe the reimbursement system. The complete law appears as Appendix L.

- 1) "Pupil" -- a person enrolled in public school or an approved program and therefore educated at least partially at direct public expense.
- 2) "Full-time equivalent pupil" -- the unit used to measure the number of pupils enrolled in public schools. It is computed as follows:
 - a) a pupil who is enrolled full-time in only one program is counted as a full-time equivalent (FTE) pupil enrolled in that program except that a full-time kindergarten pupil enrolled in a program of one-half day or less is counted as 1/2 FTE pupil;
 - b) if a pupil is enrolled in two or more programs, he or she is counted as a fraction of an FTE pupil in each program, where that fraction is equal to the number of hours (per day, week or year) the pupil is enrolled in the particular program divided by the total number of hours the pupil is enrolled in all programs;
 - c) a pupil who is enrolled in multiple programs which are conducted simultaneously and are therefore consolidated into one program is counted as one FTE pupil in the program which carries the highest pupil weight, as described below;
 - d) a pupil enrolled in a program which runs for more than 185 days per school year is counted as one full-time equivalent pupil plus a fraction of an FTE pupil, where that fraction is equal to the number of days over 180, divided by 180.
- 3) "Regular day program" -- any public school day program which is not classified as either special needs, vocational or transitional bilingual education under other statutes or regulations promulgated under those statutes.
- 4) "Weighted full-time equivalent pupil" -- a full-time equivalent pupil enrolled in any program during the current fiscal year, multiplied by the pupil weight cost index for that program.* The pupil weights established under the Massachusetts law for pupils enrolled in each program are as follows:

Regular Day	1.0
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Transitional Bilingual Program	1.4
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Special needs programs (including regular education program with modifications, regular education with no more than 25% time out, regular education with no more than 60% time out, substantially separate, home and hospital, day program prototypes	4.0
---	-----

Special Education residential program prototype	6.3
Vocational education program (day program only)	2.0

* These pupil weights reflect the relative differences in statewide expenditures per pupil among programs.

During fiscal year 1977-78 in Massachusetts, a full-time equivalent student was reimbursed at \$1598.00 (State average using weighted formula). Using the same formula, \$1,959.00 was reimbursed to school departments for every full-time equivalent student in bilingual education programs. This reflects an average difference of \$361.00 per student in excess costs.

An additional set of cost data was collected from bilingual programs in Connecticut, Massachusetts, and Rhode Island. Table 16 presents that data. As can be seen, there is considerable variation in per pupil excess expenditures reported by districts for bilingual programs. However, there is some consistency between the figures reported by Cumberland (\$305.00 per student), Springfield, Massachusetts (\$289.00) and a recalculated excess for Providence (\$290.00 local contribution).

Table 16
Bilingual Program Cost Data
From Selected Districts

	District	F.T.E.* Cost Per Pupil	Bilingual Program Cost Per Pupil
R.I.	Cumberland, R.I.	\$1,795.00	\$ 305.00 excess
	Providence, R.I.	\$2,853.00	\$ 440.00 excess (\$290.00) +
Mass.	New Haven, Conn.	\$2,100.00	\$ 700.00 excess
	Springfield, Mass.	\$1,699.00	\$ 289.00 excess
	Boston, Mass.	\$2,400.00	\$1,700.00 X (per pupil cost)
Conn.	Bridgeport, Conn.	\$2,300.00	\$ 650.00 excess

*F.T.E. - Full-time equivalent student

+ = Providence excess expenditure was recalculated to reflect a local contribution only.

X = In Boston, bilingual instruction staff is newer to the system on the lower end of the salary structure. Therefore, expenditures for bilingual program staff is significantly less than for the average regular program staff.

A summary of the data collected with respect to cost estimations reveals a great deal of variation from district to district for bilingual program expenditures. However, a number of consistent pieces of information have been drawn from the data collected.

Dr. Cardenas' study for IDRA identified five major components of bilingual programs which require funding consideration: 1. Staffing, 2. Materials, 3. Library, 4. Equipment, 5. Testing. The study, which was undertaken and completed in 1975-76, suggested an average per pupil

expenditure of \$243.77 in the implementation year. We noted that this figure should certainly be raised since inflation would impact heavily on the costs since that time.

Figures from New Jersey and Massachusetts also were presented. New Jersey, using a funding formula, will expend approximately \$300.00 per student this year, while Massachusetts had an excess cost per pupil expenditure of approximately \$361.00 in 1977-78.

Finally, data from Rhode Island, Massachusetts, and Connecticut communities were analyzed. Three of these communities were found to have an excess per pupil expenditure of approximately \$300.00.

In reviewing the data, it seems clear that a good deal of variation is encountered in cost reporting and estimation processes. This situation is precipitated by local school departments who, in an attempt to serve students in need of bilingual education, have been extremely resourceful in acquiring funds from a number of sources. Many school departments have received funds from Title I, Title II, and Title IV-B in addition to local funds and state funds where they exist.

In the final analysis, the initiative as well as the varied approaches demonstrated by local school departments have made it extremely difficult to consistently and clearly determine excess expenditures for bilingual programs.

Given the information we have at this time, an excess cost figure of approximately \$300.00 seems to be a reasonable estimate. However, the reader is cautioned that the data upon which this recommendation is made is minimal. Therefore, it is further recommended that a ceiling for total state program expenditures for the 1980-81 fiscal be established.

Recommendations

1. It is recommended that the Rhode Island Department of Education utilize a figure within a range of 45% to 50% in estimating the number of students who will become program eligible for bilingual programs in 1980-81.
2. It is recommended that the Rhode Island Department of Education use a figure of approximately \$300.00 per pupil in estimating excess costs for the reimbursement of bilingual program expenditures to local school departments in 1980-81.
3. It is recommended that the Rhode Island Department of Education set an upper limit for the total number of dollars to be reimbursed to local school departments in 1980-81.
4. It is recommended that the Rhode Island Department of Education, based on 50% of the total number of students identified on the Home Language Survey (17,327) becoming program eligible at \$300.00 per student, be prepared to expend a total of \$2,599,050.00 for bilingual programs in fiscal year 1980-81.*

* Total funding consideration must be viewed in light of the Massachusetts experience. In Massachusetts' first year of funding six years ago, a total of \$1.5 million dollars was allocated. Because of the time necessary to implement the law (waiting period) and local school department difficulties in organizing programs, acquiring staff, curriculum, etc., only about one-third of the total initial appropriation was expended in the first year. While similar problems may occur in Rhode Island, it is anticipated that current conditions in school departments, the availability of trained teachers, and an increased level sophistication of bilingual program materials will probably allow faster implementation than was the case in Massachusetts six years ago. In any case, these factors should be taken into account in determining the actual funding to be appropriated during the 1980-81 school year.